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Expectancy of Heavy Winter Rainfall - EASTERN ENGLAND

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Long-term records of 36 rainfall stations in Eastern England were examined to determine the probable heaviest falls in 1 year, 2 years and 10 years over 1 and 5 days. Period November to April.

Results

County	No of Stations	Mean Annual Rainfall	Heaviest 1 day falls in 1 year	2 years	10 years	Heaviest 5 day falls in 1 year	2 years	10 years
Holland	3	560	17.7	21.3	29.3	31.0	38.0	49.0
Huntingdon & Soke	2	547	16.5	20.0	27.0	32.0	36.5	47.0
Cambridge	7	552	16.0	19.7	27.9	30.9	36.4	47.4
Norfolk	8	635	17.5	21.2	29.5	34.9	40.5	52.1
Suffolk	3	614	17.7	21.3	30.7	34.7	41.0	54.3
Essex	6	602	17.0	21.0	28.5	34.5	41.0	52.3
Hertford	4	690	19.3	22.7	29.5	39.3	46.0	60.0
Bedford	3	619	18.0	21.7	28.7	35.0	40.7	52.0

A graphical plot of these figures showsthat the counties can be considered as a group and the results re-analysed as follows:

Rainfall Range	No of Stations	Mean Annual Rainfall	Heaviest 1 day falls in 1 year	2 years	10 years	Heaviest 5 day falls in 1 year	2 years	10 years
500-540	4	518	16.3	19.7	26.7	30.3	35.5	47.5
540-580	10	554	16.4	19.9	27.7	30.9	37.2	48.0
580-620	7	596	17.3	21.1	29.4	34.0	40.0	52.1
620-660	6	644	17.7	21.7	29.7	35.7	41.5	52.8
660-700	8	675	18.5	22.4	30.2	37.7	43.6	56.9
above 700	1	731	19.7	23.1	29.7	41.4	48.9	63.1

NB Rainfall in millimetres

These results can be smoothed for the area as a whole:

The county corrections can be used to allow for slight regional differences

Average Annual Rainfall	Heaviest falls in 1 day in 1 year	2 years	10 years	Heaviest falls in 5 days in 1 year	2 years	10 years
500 mm	15.8	19.3	26.6	29.0	34.5	45.8
550	16.5	20.1	27.7	31.4	37.1	48.7
600	17.3	21.0	28.8	33.9	39.7	51.7
650	18.1	21.8	29.9	36.3	42.3	54.6
700	18.8	22.7	31.0	38.8	45.9	57.6
750	19.5	23.5	32.1	41.2	47.5	60.5
County Corrections						
Holland	+ 1.0	+ 1.2	+ 1.4	- 0.9	+ 0.3	- 0.3
Huntingdon & Soke	0	+ 0.1	- 0.6	+ 0.7	- 0.5	- 1.5
Cambridge	- 0.6	- 0.3	+ 0.2	- 0.6	- 0.9	- 1.4
Norfolk	- 0.3	- 0.2	0	- 0.7	- 1.1	- 1.6
Suffolk	+ 0.2	+ 0.2	+ 1.6	+ 0.2	+ 0.5	+ 1.8
Essex	- 0.3	+ 0.2	- 0.3	+ 0.5	+ 1.1	+ 0.5
Hertford	+ 0.6	+ 0.4	- 1.4	+ 1.0	+ 1.6	+ 3.0
Bedford	+ 0.4	+ 0.6	- 0.5	+ 0.2	0	- 0.8

The accuracy of the county corrections are limited by the number of stations per county

Any comments or suggestions on this paper should be referred to the author.

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